



#6
2666
4/9/04
Witcomb

PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:)
Jin-Meng HO) Group Art Unit: 2666
Serial No. 09/616,900) Examiner: Melanie Jagannathan
Filed: July 14, 2000) Atty Docket No. 003493.00076

For: AN ARCHITECTURAL REFERENCE MODEL FOR QoS-DRIVEN
WIRELESS LANS

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

RECEIVED

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APR 06 2004

Technology Center 2600

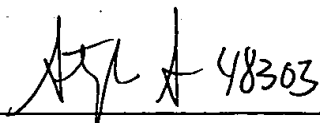
Sir:

Pursuant to 37 C.F.R. § 1.56 and in compliance with 37 C.F.R. § 1.97(b), Applicants submit herewith Form PTO 1449 listing patents and publications for consideration in connection with the above-identified application. A copy of each reference is provided herewith.

Applicant's hereby authorize the Commissioner to charge the fee set forth in 37 C.F.R § 1.17(p) of \$180.00. If this is incorrect, the Commissioner is authorized to charge any outstanding charges or credit any overpayments to our Deposit Account No. 19-0733.

Respectfully submitted,

April 2, 2004

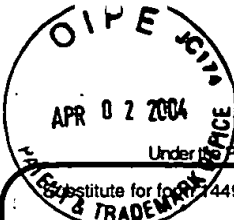


Thomas H. Jackson
Registration No. 29,808

BANNER & WITCOFF, Ltd.
Eleventh Floor
1001 G Street, N.W.
Washington, D.C. 20001-4597
(202) 824-3000

04/06/2004 BABRAHA1 00000113 190733 09616900

01 FC:1806 180.00 DA



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

| | |
|------------------------|----------------------|
| Application Number | 09/616,900 |
| Filing Date | July 14, 2000 |
| First Named Inventor | Jin-Meng Ho et al. |
| Art Unit | 2666 |
| Examiner Name | Jagannathan, Melanie |
| Attorney Docket Number | 003493.00076 |

U.S. PATENT DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|------------------------|--------------------------|--|--------------------------------|--|---|
| | | Number - Kind Code ² (if known) | | | |
| | | US- 2002/0159418 | 10-31-2002 | Rudnick et al. | |
| | | US- 2002/0163928 | 11-07-2002 | Rudnick et al. | |
| | | US- 5,012,469 | 04-30-1991 | Sardana | |
| | | US- 5,384,777 | 01-24-1995 | Almadi et al. | |
| | | US- 5,581,544 | 12-03-1996 | Hamada et al. | |
| | | US- 5,644,576 | 07-01-1997 | Bauchot et al. | |
| | | US- 5,644,715 | 07-01-1997 | Baughner | |
| | | US- 5,717,688 | 02-10-1998 | Belanger et al. | |
| | | US- 5,729,542 | 03-17-1998 | Dupont | |
| | | US- 5,787,080 | 07-28-1998 | Hulyalkar et al. | |
| | | US- 5,793,747 | 08-11-1998 | Kline | |
| | | US- 5,949,768 | 09-07-1999 | Citta et al. | |
| | | US- 5,960,000 | 09-28-1999 | Ruszczak et al. | |
| | | US- 5,970,062 | 10-19-1999 | Bauchot | |
| | | US- 5,978,382 | 11-02-1999 | Citta et al. | |
| | | US- 6,034,967 | 03-07-2000 | Citta et al. | |
| | | US- 6,115,390 | 09-05-2000 | Chuah | |
| | | US- 6,169,748 | 01-02-2001 | Barbas et al. | |
| | | US- 6,181,684 | 01-30-2001 | Turcotte et al. | |
| | | US- 6,226,277 | 05-01-2001 | Chuah | |

RECEIVED

APR 06 2004

Technology Center 2600

FOREIGN PATENT DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
|------------------------|--------------------------|---|-----------------------------------|---|--|----------------|
| | | Country Code ³ - Number ⁴ - Kind Code ⁵ (if known) | | | | |
| | | JP 02072736 A | 08-1990 | Kurokawa, Takatsugu | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Complete if Known

| | |
|------------------------|----------------------|
| Application Number | 09/616,900 |
| Filing Date | July 14, 2000 |
| First Named Inventor | Jin-Meng Ho |
| Art Unit | 2666 |
| Examiner Name | Jagannathan, Melanie |
| Attorney Docket Number | 003493.00076 |

(use as many sheets as necessary)

Sheet 2 of 4

U.S. PATENT DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|------------------------|--------------------------|--|--------------------------------|--|---|
| | | Number - Kind Code ² (if known) | | | |
| | | US- 6,236,656 | 05-22-2001 | Westerberg et al. | |
| | | US- 6,262,976 | 07-17-2001 | McNamara | |
| | | US- 6,263,204 | 07-17-2001 | Kusaki et al. | |
| | | US- 6,285,886 | 09-04-2001 | Kamel et al. | |
| | | US- 6,317,438 | 11-13-2001 | Trebes, Jr. | |
| | | US- 6,356,555 | 03-12-2002 | Rakib et al. | |
| | | US- 6,370,153 | 04-09-2002 | Eng | |
| | | US- 6,377,548 | 04-23-2002 | Chuah | |
| | | US- 6,404,738 | 06-11-2002 | Reininger et al. | |
| | | US- 6,452,915 | 09-17-2002 | Jorgensen | |
| | | US- 6,469,991 | 10-22-2002 | Chuah | |
| | | US- 6,501,741 | 12-31-2002 | Mikkonen et al. | |
| | | US- 6,507,587 | 01-14-2003 | Bahl | |
| | | US- 6,515,972 | 02-04-2003 | Gage et al. | |
| | | US-6,519,462 | 02-11-2003 | Lu et al. | |
| | | US- 6,538,989 | 03-25-2003 | Carter et al. | |
| | | US- 6,542,490 | 04-01-2003 | Ahmadvand et al. | |
| | | US- 6,567,408 | 05-20-2003 | Li et al. | |
| | | US- 6,567,416 | 05-20-2003 | Chuah | |
| | | US- 6,587,457 | 07-01-2003 | Mikkonen | |

FOREIGN PATENT DOCUMENTS

[illegible]

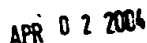
**Examiner
Signature**

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Approved for use through 04/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

(use as many sheets as necessary)

| | | | |
|-------|---|----|---|
| Sheet | 3 | of | 4 |
|-------|---|----|---|

Complete if Known

| | |
|------------------------|----------------------|
| Application Number | 09/616,900 |
| Filing Date | July 14, 2000 |
| First Named Inventor | Jin-Meng Ho |
| Art Unit | 2666 |
| Examiner Name | Jagannathan, Melanie |
| Attorney Docket Number | 003493.00076 |

[illegible]

RECEIVED

~~APR 06 2004~~

Technology Center 2800

[illegible]

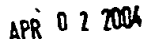
**Examiner
Signature**

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Approved for use through 04/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substantive Form 1449A/PTO

(use as many sheets as necessary)

| | | | |
|-------|---|----|---|
| Sheet | 4 | of | 4 |
|-------|---|----|---|

Complete if Known

| | |
|------------------------|----------------------|
| Application Number | 09/616,900 |
| Filing Date | July 14, 2000 |
| First Named Inventor | Jin-Meng Ho |
| Group Art Unit | 2666 |
| Examiner Name | Jagannathan, Melanie |
| Attorney Docket Number | 003493.00076 |

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|------------------------|--------------------------|---|----------------|
| | | Cali, F. et al., "IEEE 802.11 Wireless LAN: Capacity Analysis and protocol Enhancement, IEEE 1998. | |
| | | Deng, Dr-Jiunn & Chang, Ruay-Shiung, "A Priority Scheme for IEEE 802.11 DCF Access Method", IEICE Trans. Commun., Vol. E82-B, No. 1, January 1999. | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

RECEIVED

APR 06 2004

Technology Center 2600

RECEIVED

APR 06 2004

Technology Center 2600

| | | | |
|-----------------------|--|--------------------|--|
| Examiner Signature | | Date Considered | |
|-----------------------|--|--------------------|--|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PTO/SB/17 (10-03)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180

Complete if Known

Application Number 09/616,900
Filing Date July 14, 2000
First Named Inventor Jin-Meng Ho
Examiner Name Melanie Jagannathan
Art Unit 2666
Attorney Docket No. 003493.00076

RECEIVED

APR 06 2004

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number 19-0733

Deposit Account Name Banner & Witcoff, LTD.

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments
☒ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|------------------------|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1001 | 770 | 2001 | 385 | Utility filing fee | |
| 1002 | 340 | 2002 | 170 | Design filing fee | |
| 1003 | 530 | 2003 | 265 | Plant filing fee | |
| 1004 | 770 | 2004 | 385 | Reissue filing fee | |
| 1005 | 160 | 2005 | 80 | Provisional filing fee | |
| SUBTOTAL (1) | | | | | (\$ 0) |

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| | | | | | | | |
|--------------------|--|--------------|--|----------------|--|----------|--|
| Total Claims | | Extra Claims | | Fee from below | | Fee Paid | |
| Independent Claims | | | | | | | |
| Multiple Dependent | | | | | | | |

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1202 | 18 | 2202 | 9 | Claims in excess of 20 | |
| 1201 | 86 | 2201 | 43 | Independent claims in excess of 3 | |
| 1203 | 290 | 2203 | 145 | Multiple dependent claim, if not paid | |
| 1204 | 86 | 2204 | 43 | ** Reissue independent claims over original patent | |
| 1205 | 18 | 2205 | 9 | ** Reissue claims in excess of 20 and over original patent | |
| SUBTOTAL (2) | | | | | (\$ 0) |

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1051 | 130 | 2051 | 65 | Surcharge - late filing fee or oath | |
| 1052 | 50 | 2052 | 25 | Surcharge - late provisional filing fee or cover sheet | |
| 1053 | 130 | 1053 | 130 | Non-English specification | |
| 1812 | 2,520 | 1812 | 2,520 | For filing a request for reexamination | |
| 1804 | 920* | 1804 | 920* | Requesting publication of SIR prior to Examiner action | |
| 1805 | 1,840* | 1805 | 1,840* | Requesting publication of SIR after Examiner action | |
| 1251 | 110 | 2251 | 55 | Extension for reply within first month | |
| 1252 | 420 | 2252 | 210 | Extension for reply within second month | |
| 1253 | 950 | 2253 | 475 | Extension for reply within third month | |
| 1254 | 1,480 | 2254 | 740 | Extension for reply within fourth month | |
| 1255 | 2,010 | 2255 | 1,005 | Extension for reply within fifth month | |
| 1401 | 330 | 2401 | 165 | Notice of Appeal | |
| 1402 | 330 | 2402 | 165 | Filing a brief in support of an appeal | |
| 1403 | 290 | 2403 | 145 | Request for oral hearing | |
| 1451 | 1,510 | 1451 | 1,510 | Petition to institute a public use proceeding | |
| 1452 | 110 | 2452 | 55 | Petition to revive - unavoidable | |
| 1453 | 1,330 | 2453 | 665 | Petition to revive - unintentional | |
| 1501 | 1,330 | 2501 | 665 | Utility issue fee (or reissue) | |
| 1502 | 480 | 2502 | 240 | Design issue fee | |
| 1503 | 640 | 2503 | 320 | Plant issue fee | |
| 1460 | 130 | 1460 | 130 | Petitions to the Commissioner | |
| 1807 | 50 | 1807 | 50 | Processing fee under 37 CFR 1.17 (q) | |
| 1806 | 180 | 1806 | 180 | Submission of Information Disclosure Stmt | 180 |
| 8021 | 40 | 8021 | 40 | Recording each patent assignment per property (times number of properties) | |
| 1809 | 770 | 2809 | 385 | Filing a submission after final rejection (37 CFR § 1.129(a)) | |
| 1810 | 770 | 2810 | 385 | For each additional invention to be examined (37 CFR § 1.129(b)) | |
| 1801 | 770 | 2801 | 385 | Request for Continued Examination (RCE) | |
| 1802 | 900 | 1802 | 900 | Request for expedited examination of a design application | |

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 180)

SUBMITTED BY

Name (Print/Type) Thomas H. Jackson
Registration No. (Attorney/Agent) 29,808
Telephone 202-824-3000
Signature [Signature]
Date April 2, 2004

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.